

REMARKS / ARGUMENTS

This communication is filed in response to the Office Action mailed April 18, 2007. Applicants, having fully considered the issues raised therein, request continued examination and reconsideration of the application and claims. Applicants respectfully submit that, in view of the above amendments and the following remarks, the application is in condition for allowance. Withdrawal of the rejections and issuance of a Notice of Allowance is respectfully requested.

Applicants maintain their traversal of the Restriction Requirement mailed May 26, 2006.

Applicants submit the above amendments do not introduce new matter, as support for the amendments may be found in the application and claims as originally filed. Additionally, the amendments do not raise new issues requiring additional search and/or examination, as support for each amendment may be found in the claims as originally filed and have been, therefore, the subject of a previous substantive search and examination. Specifically, support for the amendments to Claims 1 and 31 may be found at least at paragraphs [0020] and [0031] of the specification and Claims 13 and 14 as originally filed and support for the amendment to Claim 10 may be found at paragraph [0035] of the specification as originally filed. Those having ordinary skill in the art would recognize that a release agent that does not migrate to the surface during pressing is a release agent that does not interfere with subsequent processing. Please cancel Claims 13 and 14 without prejudice or disclaimer.

The Examiner rejected Claims 1, 2, 4, 5, 7-14, 17, and 20-31 under 35 U.S.C. § 103(a) as being unpatentable over Husted in view of Massidda. Applicants respectfully traverse the rejection.

According to the Examiner, "Husted discloses molding a mixture of isocyanate resin, wax (release agent), and wood fibers by prepressing and pressing." The Examiner further states, "The use of a separate release agent from the wax would have been obvious to one of ordinary skill in the art because Massidda shows that a combination of release agents is used in lignocellulosic/binder composites." The Examiner concludes by stating, "The specific pressing temperatures, pressures, and times would have been obvious based on optimizing the process and product properties."

Applicants respectfully disagree with the characterizations of the Husted and Massidda references. First, Husted teaches a method of forming oriented strand board (OSB), not molded door skins including lignocellulosic fiber as recited in the present claims. Second, Massidda teaches a use of a combination of release agents including synthetic wax and salts of a tall oil fatty acid in the preparation of particle board, OSB, plywood, chip board, medium density fiber board (MDF), hardboard, and structural strand lumber.

Those having ordinary skill in the art would recognize that the OSB of Husted and the particle board, OSB, plywood, chip board, medium density fiber board (MDF), hardboard, and structural strand lumber of Massidda are distinct from the present molded door skins. For example, the molded door skins are more difficult to make than the products of Husted and Massidda due to their thin nature (between about 1 and 5 mm), and their molded character limits subsequent processing. Molded door skins may not be sanded, because sanding would result in loss of molded features such as wood grain in the surface of the door skins. The molded door skins must, therefore, have surfaces that are capable of treatment, such as painting, priming, and gluing, after the door skins are manufactured.

Many release agents, including tall oil fatty acids and their salts, have a tendency to migrate to the surface of the wood composite during pressing. As taught at paragraph [0031] some release agents do interfere with subsequent processing. When interfering release agents migrate to the surface during pressing, paints, glues, and stains may not adequately adhere or bond to the surface of the composite. Accordingly, a mere teaching that the use of a combination of release agents and wax would not render the present method obvious, because such a teaching does not recognize the non-obvious step of determining which release agents would be beneficial and which release agents would be detrimental to subsequent processing. For this reason, tall oil fatty acids would interfere with subsequent processing and would be detrimental if used in the present method. The presently rejected claims are not, therefore, obvious in view of Husted and Massidda. Withdrawal of the rejections is respectfully requested.

Claims 1, 2, 4, 5, and 7-31, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Husted in view of Marcinko. Applicants respectfully traverse the rejection.

According to the Examiner, Husted discloses molding a mixture of isocyanate resin, wax (release agent) and wood fibers by prepressing and pressing. The Examiner further states,

"The use of a separate release agent from the wax would have been obvious to one of ordinary skill in the art because Marcinko shows that a combination of release agents is used in lignocellulosic/binder compositions." Continuing, the Examiner states, "The release agents can be silicone."

Applicants respectfully submit that paragraphs [0031] and [0032] of the present specification teach that silicone is undesirable as an internal release agent because it will interfere with subsequent processing of the molded door skins made in accordance with the present claims. Presently amended claims 1 and 31 recite a release agent that will not interfere with subsequent processing of the thin-layer lignocellulosic composite. Because silicone and fatty acids will interfere with the subsequent processing, they are not a suitable release agents as suggested by the Examiner. Marcinko does not recognize the problems of fatty acid and/or silicone release agents recognized by Applicants.

The teaching that a combination of release agent and wax may be used in Marcinko is not, therefore, sufficient to suggest to one having ordinary skill in the art that the required fatty acid release agent and the optional silicone release agent of Marcinko would interfere with the subsequent processing of thin molded door skins and should be omitted and replaced by a different release agent that would not interfere with subsequent processing to achieve the presently claimed method. Stated differently, even if the proposed combination were made, it would not result in the presently claimed method, because the fatty acid and silicone release agents would migrate to the surface of the molded door skins during pressing and would interfere with subsequent processing. The combination of release agents taught by Marcinko does not, therefore, meet the presently recited release agent "that will not interfere with subsequent processing of the thin-layer lignocellulosic composite." The claims cannot be said to be obvious, therefore, in view of Husted and Marcinko. Withdrawal of the rejections is respectfully requested.

Claims 1, 2, 4, 5, 7-12, and 17-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Husted in view of Fookes and DuPont Zonyl. Applicants respectfully traverse the rejection.

As previously stated, Husted is directed to OSB production. Fookes teaches a method of forming wood composites from wood strands in the form of wafers, strips of wood, particles of wood, etc. Fookes does not disclose the use of wood fibers. Fookes further

discloses the manufacture of wood composites such as strand board, wafer board, OSB, medium density fiber board (MDF), and other strand boards. Neither Fookes nor Husted disclose the formation of molded door skins having a thickness of between about 1 mm and about 5 mm. Additionally, Fookes requires the presence of zinc borate in the wood composites.

Those having ordinary skill in the art would recognize that the formation of molded door skins having a thickness of between about 1 mm and about 5 mm presents specific challenges not faced in the formation of OSB, particle board, MDF, and other composites taught by Husted or Fookes.

Relevant art in the field makes a qualitative distinction between wood particles, such as those disclosed in Husted and Fookes, and wood fibers. See, for example, Malone, Modern Particleboard and Dry Process Fiberboard Manufacturing, pp. 31-33, 420-424 (1977). As taught in the Maloney reference, fiber may be produced only after substantial processing from wood. Particles and strands do not require the same level of processing. The methods taught by Husted and Fookes for forming the composites disclosed therein would not render the formation of molded door skins obvious, because these methods do not appreciate the additional challenges faced when producing very thin-layer lignocellulosic composites.

Additionally, neither Husted nor Fookes teach coating at least one surface of at least one die with an anti-bonding agent (as recited in Claim 1) or coating at least one die surface with an anti-bonding agent comprising silane or silicone (as recited in Claim 31). The Examiner has implicitly acknowledged that this step is not disclosed by either reference by declining to reject Claims 13-15 over the present combination of references.

There is no teaching or suggestion in either of Husted or Fookes, nor would it be obvious to try based on the teachings of Husted or Fookes, that would lead one having ordinary skill in the art to apply the methods of Husted and Fookes to a distinct class of composites (thin-layer lignocellulosic molded door skins) and then further modify the process by coating one of the dies with an anti-bonding agent. Withdrawal of the rejections is, therefore, respectfully requested.

Request for reconsideration:

Applicants submit that in view of the above amendments, remarks, and the concurrently filed Request for Continued Examination, the application is in condition for allowance. Withdrawal of the rejections and issuance of a Notice of Allowance is respectfully requested. If one or all of the claims are deemed to not be allowable, the Examiner is invited to call the undersigned attorney at the number given below for resolution of any remaining issues.

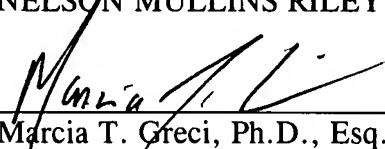
It is believed that no additional fees are due in conjunction with the filing of this response. If, however, it is deemed that additional fees are due, authorization is hereby give to deduct any such fees from Deposit Account No. 50-2548.

Respectfully requested,

NELSON MULLINS RILEY & SCARBOROUGH, LLP

July 11, 2007

Date



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